

REMARKS

In the last Office Action, the Examiner rejected claims 1, 4–8, and 10–12 under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent 4,185,168 ("*Graupe*") in view of IBM Technical, Recording or Broadcasting Automatic Gain Control Compressor ("*IBM*"). The Examiner also rejected claims 2 and 9 under 35 U.S.C. § 103(a) as unpatentable over *Graupe* as modified by *IBM* and further in view of U.S. Patent 5,170,437 ("*Strahm*"). And the Examiner rejected claim 3 under 35 U.S.C. § 103(a) as unpatentable over *Graupe* as modified by *IBM* and further in view of U.S. Patent 5,253,299 ("*Ishida*"). Because the Examiner fails to make a *prima facie* case for obviousness, Applicant respectfully traverses the rejection of these claims.

Information Disclosure Statement

On May 17, 2002, Applicant submitted a Form PTO-1449 identifying a reference for consideration by the Examiner. Applicant has received no indication that the submitted reference has been considered. Applicant requests that the next communication from the Office include a copy of the Form PTO-1449 previously provided with an indication that the cited reference has been considered.

Amendment

Applicant has amended claims 1, 3, 4, 7, 8, 10, and 11 to more particularly recite Applicant's invention.

Rejection under § 103(a)

To establish a *prima facie* case of obviousness under §103(a), each of three requirements must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary

skill in the art, to combine references or modify a reference. (MPEP § 2143 (8th ed. Rev. Feb. 2003).) Second, there must be a reasonable expectation of success. (*Id.*) Moreover, both of these requirements must “be found in the prior art, and not be based on applicant’s disclosure.” (*Id.*) Third, the reference or references, taken alone or in combination, must disclose or suggest every element recited in the claims. (MPEP §2143.03.)

Claim 1 recites, *inter alia*:

An apparatus for reducing a level of noise contained in an input signal, comprising: . . .

an adjusting device for adjusting a level of said input signal so as to make said detected level of said noise equal to a predetermined threshold level

Applicant agrees with the Examiner that “*Graupe* fails to teach a restoring device for restoring a level of said adjusted input signal to [said] level of said input signal.” (October 31, 2003 Office Action at 3.) Applicant disagrees, however, that *Graupe* teaches an “adjusting device,” as recited in claim 1. According to the Examiner, notch filter 18-1 of *Graupe* teaches the “adjusting device,” recited in claim 1. A notch filter generally only reduces a level of a signal that has a specific frequency. In *Graupe*, notch filter 18-1 only reduces a level of a signal outputted from gate 28 or gate 29. (See *Graupe*, Fig. 5.) In case of a plurality of input sources whose average level of noise is different from each other, *Graupe*’s notch filter 18-1 will not make the noise level of the outputted signal from each input source uniform. By contrast, claim 1 recites, *inter alia*, “an adjusting device for adjusting a level of said input signal so as to make said detected level of said noise equal to a predetermined threshold level.” *IBM* also fails to disclose or suggest an “adjusting device” as recited claim 1. Thus, *Graupe*

and *IBM* individually and in combination fail to disclose or suggest an “adjusting device” as recited claim 1.

Moreover, to the extent the Examiner admits that “*Graupe* fails to teach a restoring device,” Applicant asserts that *IBM* fails to compensate for this deficiency and disputes that “it would have been obvious to one of ordinary skill in the art to utilize the teaching of *IBM* into *Graupe* to provide automatic gain control ACC circuitry to have quality audio signal.” (*Id.*)

Graupe discloses an apparatus for filtering noise from an information bearing signal. The apparatus receives an input signal, including information and noise, via line 11. (*Graupe*, Col. 7, ll. 43–45; Figure 4.) The input signal is passed to multiple band pass filters 13-N and smoothed absolute value detectors 14-N, which determine a noise level for each band and eventually transmit those signals to notch filters 18-N. (*Graupe*, Col. 7, ll. 45–68, Col. 8, ll. 24–33; Figures 4 & 5.) The input signal is also transmitted to notch filters 18-N. (*Graupe*, Col. 8, ll. 52–55; Figures 4 & 5.) Notch filters 18-N either filter noise from the received signal or bypass the received signal to the next notch filter, eventually outputting a signal filtered of noise. (*Graupe*, Col. 8, l. 48–Col. 9, l. 6; Figure 4.)

IBM, by contrast, discloses an automatic gain control compressor for broadcasting or recording sound. Data are compressed, broadcast or recorded, and then decompressed to restore the compressed data “to exactly reproduce the original sound.” (*IBM*, p. 1, ¶ 2, p. 2, ¶¶ 1 & 2.) The initial broadcast or recording is made at a high enough volume to mask all background noise. (*IBM*, p. 1, ¶ 2.) The compressor attenuates the input signal, which lacks background noise, in order to output a

compressed signal, and the compressor creates an AGC signal. (*Id.*, p. 2, ¶ 2.) When playing back the signal, the AGC signal controls an expander, which converts the compressed signal back to the original signal. (*Id.*) That is, *IBM* discloses compressing data, which has no background noise, and decompressing the data its the original state.

To support the allegation that there is motivation to combine *Graupe* and *IBM*, the Examiner claims, “*Graupe* and *IBM* TDB are both directed to noise reduction restoring device as taught by *IBM* in *Graupe* because this would provide an automatic gain control ACC circuitry having quality audio signal.” (October 31, 2003 Office Action at 6.) As noted, however, *IBM* is not directed toward a noise reduction restoring device. The initial broadcast or recording is made at a high enough volume to mask all background noise. (*IBM*, p. 1, ¶ 2.) Thus, there is no need to reduce noise. *Graupe* is also not directed toward a noise reduction restoring device. *Graupe* is directed toward filtering noise from an input signal but not “a noise reduction restoring device.”

Further, the Manual of Patent Examining Procedure specifies, “If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.” (MPEP § 2143.02 (8th ed. Rev. Feb. 2003).) Although *Graupe* discloses filtering noise from an input signal, it does not disclose compressing data. *IBM*, however, discloses decompressing previously compressed data to reproduce the original sound. *Graupe* cannot be combined with *IBM* without modifying one or both of the references. Thus, there is no motivation to combine the references and there is no *prima facie* obviousness basis for rejecting the claims over *Graupe* in view of *IBM*.

According to the Examiner, *IBM* “teaches a restoring device for restoring a level of an adjusted input signal in that the left channel signal and right channel signal as shown in fig. a are restored to the respective left and right original audio signal input levels as shown in fig. c by the AGC (automatic gain control). See page 1, second paragraph.” (October 31, 2003 Office Action at 6.) *IBM*, however, discloses decompressing data, which was recorded at a level to mask background noise and which has no noise to make equal to or lower than a predetermined threshold level. This is not the same as, “a restoring device for restoring *a level of said reduced adjusted signal* to said level of said input signal,” as recited in claim 1.

Because *Graupe* and *IBM* fail individually or in combination to disclose or suggest at least “an adjusting device for adjusting a level of said input signal so as to make said detected level of said noise equal to a predetermined threshold level,” and “a restoring device for restoring *a level of said reduced adjusted signal* to said level of said input signal,” combination of the references cannot render claim 1 obvious. Applicant further submits that there is no motivation to combine the references.

Because the elements required for a *prima facie* case for obviousness are lacking, Applicant respectfully submits that claim 1 is allowable over the references. Similarly, claims 4–7 are likewise allowable over the cited references at least because of their dependence from claim 1. Applicant requests withdrawal of the rejection of these claims.

The Examiner rejected claim 2 under § 103(a) as unpatentable over *Graupe* as modified by *IBM* and in view of *Strahm*. *Strahm* discloses an audio signal energy level detector. *Strahm* fails to disclose, however, “an adjusting device for adjusting a level of

said input signal so as to make said detected level of said noise equal to a predetermined threshold level,” and “a restoring device for restoring a level of said reduced adjusted signal to said level of said input signal,” as recited in claim 1, from which claim 2 depends. *Strahm* fails to compensate for the deficiencies of *Graupe* and *IBM*, and also fails at least to provide any motivation to combine the three references. Thus, combination of the references cannot render the claim obvious. Withdrawal of the rejection is respectfully requested.

The Examiner also rejected claim 3 under § 103(a) as unpatentable over *Graupe* as modified by *IBM* and in view of *Ishida*. *Ishida* discloses a noise reduction apparatus, but fails to disclose, “an adjusting device for adjusting a level of said input signal so as to make said detected level of said noise equal to a predetermined threshold level,” and “a restoring device for restoring a level of said reduced adjusted signal to said level of said input signal,” as recited in claim 1, from which claim 3 depends. Thus, *Ishida* fails to compensate for the deficiencies of *Graupe* and *IBM* and this combination of references cannot render the claim obvious. Withdrawal of the rejection is respectfully requested.

The Examiner also rejected claim 8 under § 103(a) as obvious over *Graupe* in view of *IBM*, stating, “As to claims 8, 10-12, these are the method claims of claims 1, and 3-5, respectively. Thus note claims 1, and 3-5, respectively, for rejections.” (October 31, 2003 Office Action, at 4.) Without agreeing with the Examiner’s characterization of claims 8 and 10–12, the Examiner acknowledged “*Graupe* fails to teach a restoring device for restoring a level of said adjusted input signal to [said] level of said input signal.” (October 31, 2003 Office Action, at 3.) For the reasons given

above with respect to claim 1, *Graupe* and *IBM* fail individually and in combination to disclose or suggest, "adjusting a level of said input signal so as to make said level of said detected noise equal to a predetermined threshold level," and "restoring a level of said reduced adjusted signal to said level of said input signal," as recited in claim 8.

There is also no motivation to combine *Graupe* and *IBM*.

As *Graupe* and *IBM* fail to disclose or suggest every element recited in claim 8, Applicant respectfully requests withdrawal of the rejection. Claims 10–12 are likewise allowable over *Graupe* at least because of their dependence from claim 8.

The Examiner also rejected claim 9 under § 103(a) as unpatentable over *Graupe* in view of *IBM* and further in view of *Strahm*. As noted above with respect to claim 2, *Strahm* discloses an audio signal energy level detector but fails to disclose, "adjusting a level of said input signal so as to make said level of said detected noise equal to a predetermined threshold level," and "restoring a level of said reduced adjusted signal to said level of said input signal," as recited in claim 8, from which claim 9 depends. Thus, *Strahm* fails to compensate for the deficiencies of *Graupe* and *IBM* and this combination of references cannot render the claim obvious. Withdrawal of the rejection is respectfully requested.

Applicant respectfully requests that this Amendment After Final under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 1–12 in condition for allowance. Applicant also submits that the entry of this Amendment After Final would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

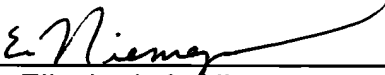
In view of the foregoing remarks, Applicant submits that this claimed invention is not rendered obvious by the references cited against this application. Applicant therefore requests the entry of this Request for Reconsideration, the Examiner's reconsideration of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: March 1, 2004

By: 
Elizabeth A. Niemeyer
Reg. No. 52,070